New York State Department of Transportation Yellow Flag NB2228W013

By: Ben Colangelo

Flag Date: March 23, 2022

Superseding Information:

This flag supersedes: YF NB2158W003

Structure Information

BIN: 1065318 Region: 11 - NEW YORK CITY

Feature Carried: 278I278IX2M23027 County: KINGS

Feature Crossed: 6TH AVENUE Political Unit: City of NEW YORK
Orientation: 8 - NORTHWEST Approximate Year Built: 1962

Posted Load Matches Inventory: Yes

Bridge Load Posting (Tons): Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp Number of Spans: 322

Verbal Notification Information

Person Notified: Heinz Joachim, P.E. Date: March 23, 2022 10:00:00 AM

Of: NYSDOT Region 11

Signature Information

Signature: Ben Colangelo, P.E. 068498 Date: April 15, 2022

Reviewed By: Robert Kemp Date: April 15, 2022

Attachments: 5

Flag Date: March 23, 2022

Flagged Elements

Parent Element	Element	Total Quantity	Unit
Span Number : 151			
	107 - Steel Open Girder/Beam	781	ft
	PR831 - Steel Beam End	34	each

Flagged Condition Description

Yellow Flag No. NB2228W013

Location: Span 151 Girder G6 at Pier 150.

Description: The end of Girder G6 on Span 151 side of Pier 150 exhibits severe corrosion resulting in an overall lower web bearing area section loss of approximately 53% (previously 55%) and an overall shear web area section loss of approximately 50% (previously 35%) with a localized average web section loss of approximately 68% (previously 66%) for 4"high directly above the bearing (Photos 2 and 3).

The remaining thickness measurements (RTM), as measured with a D-meter, for the full height of the web were taken adjacent to the guide angles at both faces of the girder as the RTM were unable to be taken directly behind the guide angles.

This girder is located above an expansion bearing.

An area of the girder web, approximately 5' long from the girder end has been sand blast cleaned for the girder height and approximately 10' long along the lower web and bottom flange since the previous inspection.

Notes:

- 1. The expansion bearing below Girder G6 exhibits moderate corrosion with minor section loss and pack rust to the rocker and 100% section loss for the top half of both guide plates.
- 2. The adjacent Girders G5 and G7 are in good condition with repairs utilizing steel plates and angles previously installed, reinforcing the web and bottom flanges.
- 3. The end diaphragms at Bays 5 and 6 exhibit corrosion with up to 15% section loss at the flanges.
- 4. The flagged condition was accessed using 30ft bucket truck with no MPT since it is located within a parking lot area.

Flag Photographs

Photo Number: 1 Photo Filename: IMG_3321.JPG

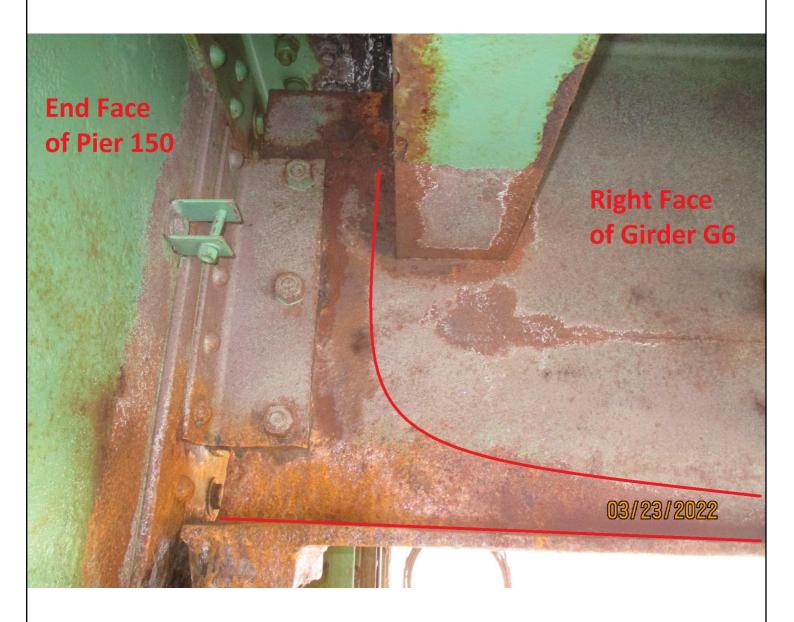


Attachment Description: General view of the flagged condition at Girder G6 in Span 151 at Pier 150. Looking Begin.

BIN 1065318

Flag Date: March 23, 2022

Photo Number: 2 Photo Filename: IMG_3311.JPG

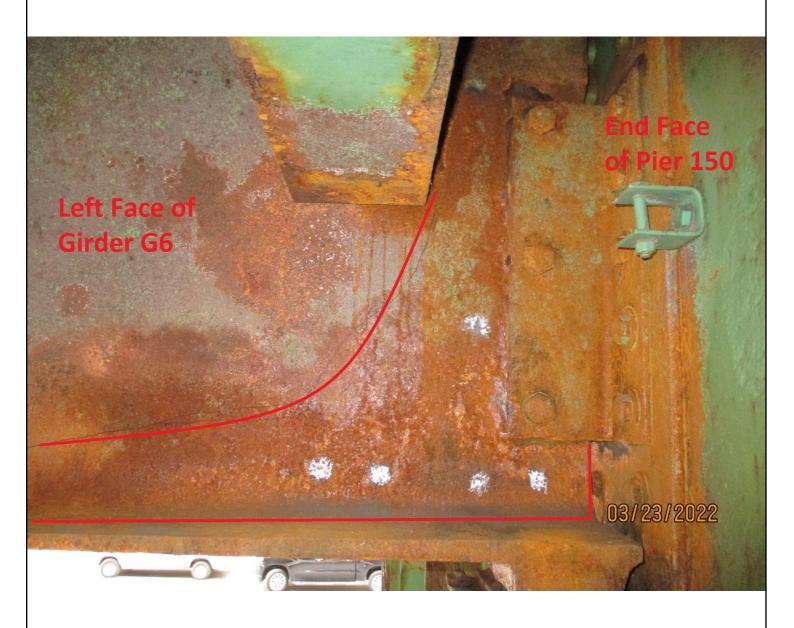


Attachment Description: The right face of Girder G6 in Span 151 at Pier 150. General view of the corrosion and severe section loss at the girder web. Looking Left. (Note Sand blast cleaning since the previous inspection).

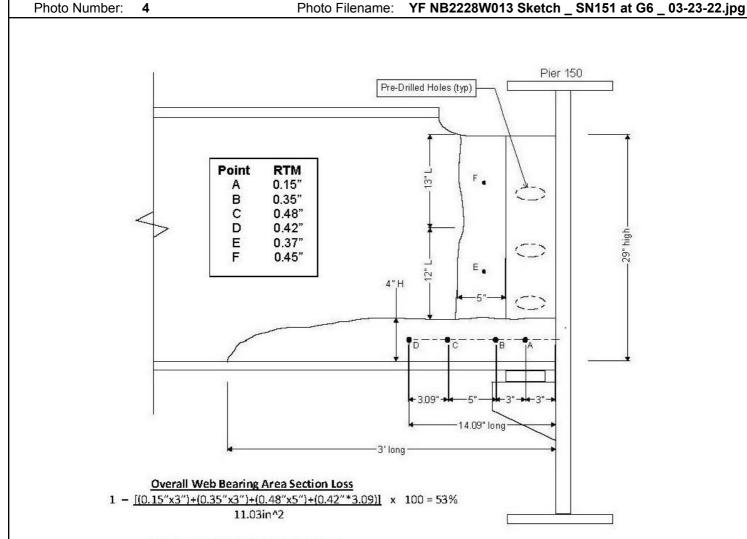
BIN 1065318

Flag Date: March 23, 2022

Photo Number: 3 Photo Filename: IMG_3318.JPG



Attachment Description: The left face of Girder G6 in Span 151 at Pier 150. Close up view of the corrosion and severe section loss at the girder web. Looking Right. (Note sand blast cleaning since the previous inspection).



Overall Shear Web Area Section Loss

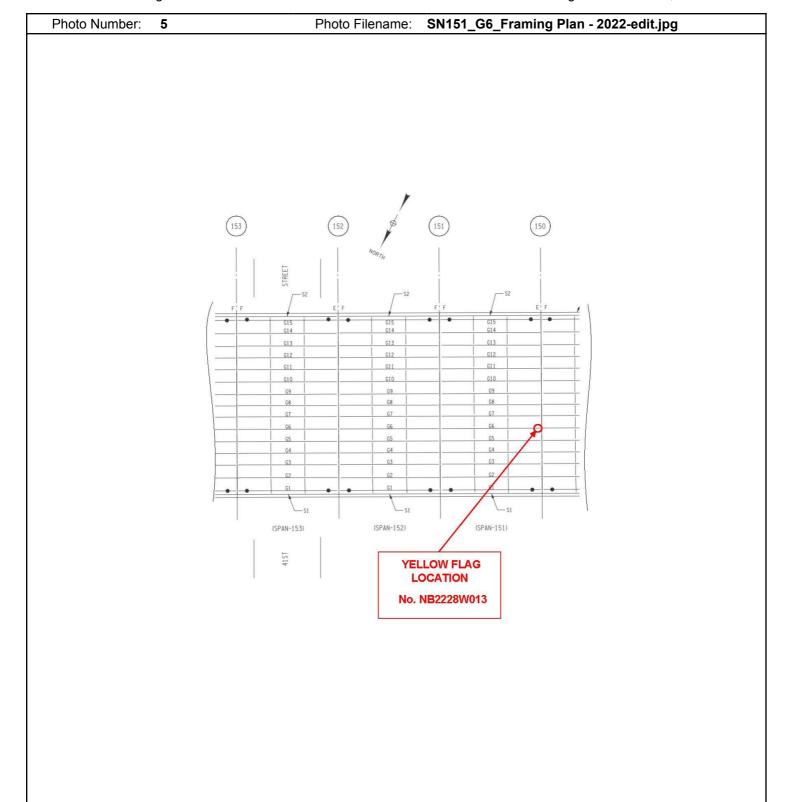
 $1 - [(0.45"x13")+(0.38"x12")+((0.15"+0.35")/2x4")] \times 100 = 50\%$ 22.71in^2

- Notes:
 -As-built web thickness = 0.783"
- -Length of bearing area = 18 x web thickness = 18 x 0.783" = 14.09" -Overall bearing area = 14.09" x 0.783" = 11.03 in^2 -As-built shearing web area = 29" x 0.783" = 22.71 in^2

- -The guide angles at the face of the girder were not shown for clarity purposes
 -The remaining area at the lower web beyond 14.09" length exhibits approximately 15%-25% section loss

Left Face of Girder G6 Sketch in Span 151 at Pier 150

Attachment Description: 2022 Girder Section Loss Sketch



Attachment Description: 2022 YF Location Framing Plan